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WHAT IS CLAIMED IS:

1. A process for making an arc tube, comprising the steps of sintering an arc tube composition to form an arc tube; and annealing the arc tube in a vacuum.

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2. The process according to claim 1 wherein the annealing step occurs at a temperature from about 1000°C to 1500°C.

10 3. The process according to claim 2 wherein the annealing step occurs at about 1200°C.

4. The process according to claim 1 wherein the step of sintering an arc tube composition to form an arc tube includes forming a ceramic arc tube.

15 5. The process according to claim 1 further comprising the step of filling the arc tube.

6. The process according to claim 5 further comprising the step of filling the arc tube with mercury.

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7. The process according to claim 6 further comprising the step of filling the arc tube with mercury having a weight between about 5.5 and 6.5 milligrams.

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8. The process according to claim 5 further comprising the step of filling the arc tube with halide.

9. The process according to claim 8 further comprising the step of filling the arc tube with a halide having a weight between 10 and 15 milligrams.

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10. The process according to claim 1 wherein the annealing step includes maintaining a pressure of about 10^{-6} torr.

LD 11444

11. The process of claim 1 wherein the arc tube has a gap length between about 7.5 and 8 mm.

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12. A process for making a ceramic metal halide lamp comprising the steps of:

 - sintering an arc tube composition to form an arc tube;
 - annealing the arc tube at a temperature from about 1000° to about 1500°C; and
 - sealing the arc tube.

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13. The process according to claim 12 wherein the annealing step includes maintaining a pressure of about 10^{-6} torr.

14. The process according to claim 12 further comprising the step of filling the arc tube.

15. The process according to claim 14 further comprising the step of filling the arc tube with mercury.

16. The process according to claim 15 further comprising the step of filling the arc tube with mercury having a weight between about 5.5 and 6.5 milligrams.

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17. The process according to claim 14 further comprising the step of filling the arc tube with a halide.

18. The process according to claim 17 further comprising the step of filling the arc tube with a halide having a weight between 10 and 15 milligrams.

LD 11444

19. The process according to claim 12 wherein annealing occurs at a temperature of about 1200°C.

20. The process according to claim 12 wherein the step of annealing
5 includes annealing the arc tube in a vacuum.

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